CLAIMS

1. A drive system suitable for use in a bicycle, said drive system including a manually-operable means (9) and a drive train connected to the manually-operable means for transferring drive from the manually-operable means (9) to at least one of the bicycle wheels, wherein the manually-operable means is mounted for substantially rectilinear reciprocating movement on a lever system that includes a first lever (1) having a first end connected to a first pivot (4) and a second end (7) that is rotatable about the first pivot, a second lever (6) having a first end that is pivotably connected to the second end of the first lever (1) and a second end to which the manually-operable means (9) is attached, and a tie rod (2) having a first end that is pivotably connected to a second pivot (5) and a second end that is pivotably connected to the second lever between the first and second ends thereof; characterised in that the first lever (1) is constructed and arranged for limited reciprocating rotation of the second end about the first pivot (4).

2. A drive system according to claim 1, wherein the manually-operable means (9) is a pedal.

3. A drive system according to claim 1 or claim 2, including two lever systems that are interconnected for opposed reciprocating movement, each lever system including a manually-operable means (9).

4. A drive system according to claim 3, including a hydraulic drive pump (10) that is connected to a third pivot and to the first lever (1) between the first and second ends thereof, for actuation by pivoting movement of the first lever.

5. A drive system according to claim 4, including means (12) for adjusting the position of the third pivot relative to the first pivot, to adjust the stroke length of the cylinder.

6. A drive system according to claim 5, including a hydraulic adjuster (12) for adjusting the position of the third pivot.

7. A drive system according to any one of claims 4 to 6, wherein said hydraulic drive pump (10) is connected through a hydraulic circuit to a hydraulic motor (17).

8. A drive system suitable for use in a bicycle, said drive system including a manually-operable means (30) and a drive train connected to the manually-operable means for transferring drive from the manually-operable means to at least one of the bicycle wheels, wherein the manually-operable means (30) is mounted for substantially rectilinear reciprocating movement, wherein said manually-operable means is attached to a shaft (32) that is mounted for axial reciprocating movement.

9. A drive system according to claim 8, wherein the manually-operable means (30) is a pedal.

10. A drive system according to claim 8 or claim 9, including a pair of shafts (32) mounted substantially parallel to one another for axial reciprocating movement, each said shaft having a manually-operable means (30) attached thereto.

11. A drive system according to claim 10, wherein said shafts (32) are interconnected for opposed reciprocating movement.

12. A drive system according to claim 10 or claim 11, wherein said shafts are drivingly connected to a sub-shaft (40) that is mounted for axial reciprocating movement.

13. A drive system according to claim 12, wherein said shafts (32) are mounted substantially perpendicular to the sub-shaft (40).

14. A drive system according to claim 12 or claim 13, wherein said sub-shaft (40) is connected to a hydraulic drive pump (52).

15. A drive system according to claim 14, wherein said hydraulic drive pump (52) is connected through a hydraulic circuit to a hydraulic motor (54).

16. A drive system according to claim 7 or claim 15, wherein said hydraulic drive motor (54) is a variable capacity motor.

17. A drive system according to claim 7, claim 15 or claim 16, including a plurality of hydraulic motors (17) and means (16) for connecting the motors into the hydraulic circuit individually, in series or in parallel to adjust the gearing effect of the drive system.

18. A bicycle having a drive system as claimed in any one of the preceding claims.

19. A bicycle according to claim 18, including a hydraulic drive train that includes at least one hydraulic motor for driving one or both wheels of the bicycle.